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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,200	07/26/2006	Jingwei Zhang	284467US2PCT	9279
22850	7590	04/06/2007		
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER A, MINH D	
			ART UNIT	PAPER NUMBER
			2821	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/06/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/06/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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## Office Action Summary

**Application No.**

10/565,200

**Applicant(s)**

ZHANG ET AL.

**Examiner**

Minh D. A

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 1/20/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16-20 and 25-30 is/are rejected.
- 7) ☒ Claim(s) 21-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

***DETAILED ACTION***

1. This is a response to the Applicants' filing on 7/26/06. In virtue of this filing, claims 16-30 are currently presented in the instant application.

***Priority***

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Inventorship***

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

***Abstract Unaccepted***

4. The abstract is objected to because the abstract includes Figure 1, the figure 1 does not need to be labeled at the abstract. Correction is required. See MPEP § 608.01(b).

***Specification Unaccepted***

5. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

### ***Arrangement of the Specification***

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

### ***Drawings Accepted***

6. The drawings submitted on 1/20/06 are accepted.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 16-17, 20 are rejected under 35 U.S.C. 102(a) as being anticipated by Randazzo et al (Pub. No: US 2002/0140357 A1).

Regarding claim 16, Randazzo discloses in the figures 4-5 that, a fluorescent lamp driver circuit comprising at least first and second electrodes (F1 and F2) and a space containing a gas to be excited (col.1, lines [001] to line [0003], the drive circuit comprising: a voltage generator (AC source); an inductor (L1) connected to the voltage generator (AC) and connected to the structure to supply the first and second electrodes (f1 and F2) with a periodic voltage of a frequency; and resonance (C3) means for fixing the frequency at substantially the resonant frequency of the system of the structure and the inductor (L1). Col.1, lines [0005] to lines [0008].

Regarding claim 17, Randazzo discloses in the figures 4-5 that, a fluorescent lamp driver circuit comprising the inductor (L1) is connected to the first electrode (F1), and the resonance means comprises: first and second switches, the first switch placed between the voltage generator (AC) and the inductor (L1), the second switch connected to the first switch and to the second electrode; and means for controlling the switches, the means for controlling being coupled to means for measuring an image of the current passing through the structure, to fix the frequency.

Regarding claim 20, Randazzo discloses in the figures 4-5 that, a fluorescent lamp driver circuit comprising the resonance means is configured to operate for a plurality of resonant frequencies.

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9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 18-19 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Randazzo et al (Pub. No: US 2002/0140357 A1).

Regarding claims 18-19, Randazzo discloses in the figures 4-5 that, a fluorescent lamp driver circuit comprising a voltage source.

However, Randazzo does not clearly disclose the voltage source being at least partly sinusoidal or truncating the voltage. It would have been an obvious matter of design choice to employ voltage source being at least partly sinusoidal or truncating the voltage in order to maximize the usage of his invention, since applicant does not disclose that, all of these limitations can solve any stated problem and for any particular purpose.

Regarding claim 25, Randazzo discloses in the figures 4-5 that, a fluorescent lamp driver circuit comprising a resonance circuit for varying frequency.

However, Randazzo does not clearly disclose that, the resonance circuit having the frequency is between 10 to 300 KHz.

It would have been an obvious matter of design choice to employ the resonance circuit having the frequency is between 10 to 300 KHz in order to maximize the usage of

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his invention, since applicant does not disclose that, all of these limitations can solve any stated problem and for any particular purpose.

11. Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Randazzo et al (Pub. No: US 2002/0140357 A1) in view of Yoshida et al (Pub. No. US 2002/0027412).

Regarding claims 26-28, Randazzo discloses in the figures 4-5 that, the fluorescent lamp driver circuit comprising the first and second electrodes of the fluorescent lamp.

However, Randazzo does not disclose that, the fluorescent lamp driver circuit comprising the first and second electrodes of the structure forming the flat lamp and space apart.

Yoshida discloses in the figures 8A-8B that, the first and second electrodes of the structure forming the flat lamp and space apart.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the first and second electrodes of the structure forming the flat lamp and space apart such as that suggested by Yoshida in the lamp circuit of Randazzo in order to improve the high color rendering capability and suitable for use in any type light source.

Regarding claims 29-30, Randazzo discloses in the figures 4-5 that, the fluorescent lamp driver circuit comprising the first and second electrodes of the fluorescent lamp.

However, Randazzo does not disclose that, the fluorescent lamp driver circuit comprising the structure forms a flat lamp for a backlight and for deposition system for plasma CVD process.

Yoshidat discloses in the figures 6-8B that, the fluorescent lamp driver circuit comprising the structure forms a flat lamp for a backlight and for deposition system for plasma CVD process.

It would have been an obvious to one of ordinary skill in the art at the time the invention was made to employ the first and second electrodes of the structure forming the flat lamp and for deposition system for plasma CVD process such as suggested by Yoshidat in the lamp circuit of Randazzo in order to improve the backlight and improve to use in the fluorescent layer.

***Allowable Subject Matter***

12. Claims 21-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest that, a transformer provided with a primary winding and with a secondary winding forming the inductor, the primary winding connected to the voltage generator and the secondary winding connected to the first and second electrodes, and wherein the resonance means comprises a switch placed in a path from the voltage generator to the primary winding of the transformer, and a control system connected to the switch to open and close the



switch over a period, wherein closing of the switch, which is closed for a duration, is triggered by choice at one of the following instants: at a zero crossing of the current flowing through the structure; when the voltage crosses a threshold voltage; at a threshold light level; or when the current flowing through the structure crosses a threshold current recited in dependent claim 21.

### ***Citation of relevant prior art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Raiser et al (Pub. No: US 2002/0175629) discloses a method for starting a discharge lamp.

Prior art Okamoto et al (U.S. Patent No. 2002/0093295) discloses a light source device of a dielectric barrier discharge lamp.

Prior art Conrad et al (U.S. Patent No. 6,488,819) discloses a process and apparatus for chemical conversion.

### ***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dieu A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 AM-2: 45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Owens Douglas W can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner

Minh A

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3/31/07

*Shih-Chao Chen*  
**SHIH-CHAO CHEN**  
**PRIMARY EXAMINER**